

REMARKS

The amendments above and these remarks are responsive to the non-final Office action dated January 8, 2007, and are being filed under 37 C.F.R. § 1.111. Claims 1–20 are pending in the application. In the Office action, the Examiner (1) objected to the specification, indicating that references to other applications must be updated, (2) objected to claim 12 for a minor typographical error, and (3) rejected each of the pending claims as follows:

- Claim 13 was rejected under 35 U.S.C. § 112, first paragraph, for an alleged lack of enablement;
- Claims 2–11 were rejected for nonstatutory obviousness-type double patenting as being unpatentable over claims 10, 16, and 20 of U.S. Patent No. 7,090,676 to Huebner et al.;
- Claims 1–20 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 4,919,119 to the Jonsson et al. ("Jonsson"); and
- Claims 1–3, 5, 8–11, 14, 16–18, and 20 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 6,129,728 to Schumacher et al. ("Schumacher").

Applicant traverses the rejections, contending that all of the claims are enabled and patentable over the cited references. Nevertheless, to expedite the issuance of a patent, and to more particularly point out and distinctly claim aspects of the invention that applicant wants to patent now, applicant has (1) canceled claims 12 and 13, without prejudice, (2) amended claims 1, 2, 9, and 14–20, (3) added new claims 21–25, and (4) filed a terminal disclaimer relative to U.S. Patent No. 7,090,676. However, applicant reserves the right to pursue the original subject matter of any of the canceled and/or amended claims at a later time. Furthermore, applicant has presented arguments showing that all of the pending claims are patentable over the cited references.

Accordingly, applicant respectfully requests reconsideration of the application in view of the amendments above and the remarks below, and prompt issuance of a Notice of Allowance covering all of the pending claims.

I. Objection to the Specification

The Examiner objected to the specification, indicating that references to co-pending applications must be updated. In response, applicant has amended the specification to recite an application serial number (and, where appropriate, a U.S. Patent No.) at each position where a serial number was unavailable at the time of filing. Accordingly, the objection to the specification should be removed.

II. Amendments to the Claims

The present communication amends claims 1, 2, 9, and 14–20, and adds new claims 21–25. Each of these amendments to the claims is fully supported by the application. Exemplary support (or an explanation) for each of these amendments is provided, without limitation, in the following table:

<i>Claim</i>	<i>Exemplary Support (or Explanation)</i>
1 (Independent)	Page 2, lines 11–13; Figures 2, 3, 15, and 16
2 (Independent)	Page 2, lines 11–13; Figures 2, 3, 4, 15, and 16
9	(Improved clarity)
14 (Independent)	Page 2, lines 11–13; Page 11, lines 7–10; Figures 2 and 3
15	Claim 14
16	(Addresses formal issue created by amendment of claim 14)
17	(Addresses formal issue created by amendment of claim 14)

<i>Claim</i>	<i>Exemplary Support (or Explanation)</i>
18	(Addresses formal issue created by amendment of claim 14)
19	(Addresses formal issue created by amendment of claim 14)
20	(Addresses formal issue created by amendment of claim 14)
21 (New)	Page 6, lines 4–8
22 (New)	Page 8, lines 5–18
23 (New)	Page 8, lines 11–13
24 (New)	Page 6, lines 4–8
25 (New/ Independent)	Claim 2; Page 2, lines 11–13; Figures 2, 3, 4, 15, and 16

III. Claim Objection

The Examiner objected to claim 12 for including a minor typographical error. However, claim 12 has been canceled, rendering the objection moot.

IV. Claim Rejections – 35 U.S.C. § 112

The Examiner rejected claim 13 under 35 U.S.C. § 112, first paragraph, as allegedly failing to comply with the enablement requirement. Applicant traverses the rejection, contending that the claim is fully enabled by the application. However, claim 13 has been canceled, rendering the rejection moot.

V. Double Patenting

The Examiner rejected claims 2–11 on the grounds of nonstatutory obviousness-type double patenting. In particular, the Examiner asserted that claims 2–11 are unpatentable over claims 10, 16, and 20 of U.S. Patent No. 7,090,676 to Huebner et al. However, the present communication amends independent claim 2, rendering the rejection moot. Nevertheless, to simplify prosecution by reducing the number of issues

under consideration, applicant has filed a terminal disclaimer relative to the '676 patent with the present communication.

VI. Claim Rejections – 35 U.S.C. § 102

The Examiner rejected each of the pending claims as being anticipated by Jonsson (claims 1–20) and/or Schumacher (claims 1–3, 5, 8–11, 14, 16–18, and 20). Applicant traverses the rejections, contending that the cited references do not teach or suggest every element of any of the rejected claims. Nevertheless, for the reasons set forth above, applicant has amended every independent claim. Each of the pending claims is patentable for at least the reasons set forth below.

A. Claims 1 and 21–23

Independent claim 1, as amended, reads as follows:

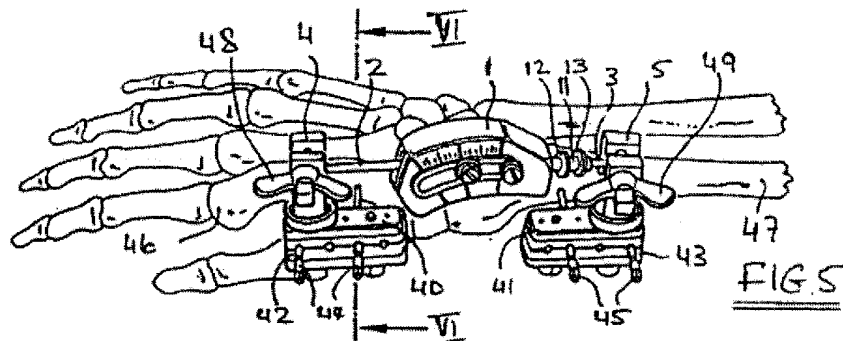
1. (Currently Amended) A method of bone fixation, comprising:
securing a bone plate to at least one bone, or portion thereof, such that the bone plate is disposed under skin; and
adjusting a relative disposition of plate members of the bone plate by relative movement of the plate members via an adjustable joint that connects the plate members and observation of reference marks that are distinct from the adjustable joint, the reference marks being disposed on the bone plate and being configured to indicate a plurality of predefined adjustments.

Claim 1 is patentable over Jonsson and Schumacher because neither reference teaches or suggests every element of amended claim 1.

i. Jonsson

Jonsson does not teach or suggest “securing a bone plate to at least one bone, or portion thereof, such that the bone plate is disposed under skin,” as recited by amended claim 1. Instead, Jonsson relates to a fixator for external use as indicated by

the title of the patent: “External Dynamic Bone Fixation Device” (emphasis added). An embodiment of the fixator attached to bone is illustrated Figure 5 of Jonsson:



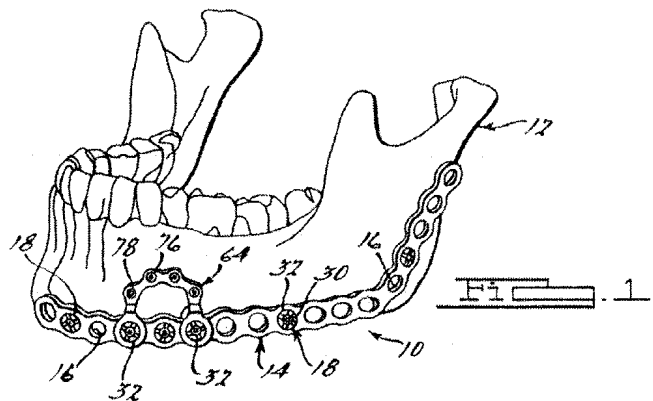
The fixator has a main portion that is installed outside the body of a patient (and thus above the patient's skin) by attachment to pins 44 and 45, which extend from bone out through the skin.

In the Office action, the Examiner suggested that housing 6 (of articulation portion 1) and pin-holding base-plate 43 “are bone plates because they are plates used on or with bones.” However, neither housing 6 nor base-plate 43 is disclosed to be “disposed under skin,” as recited by claim 1. In addition, housing 6 and base-plate 43 do not have a low profile or other features consistent with a structure to be disposed under skin (see, for example, the subject application on page 9, lines 2–4, 11–13, and 20–22). Furthermore, it would not have been obvious to structure the external fixator of Jonsson for placement under skin because this would substantially change the external fixator's principle of operation and the surgical procedure for installation.

ii. Schumacher

Schumacher does not teach or suggest “observation of reference marks that are distinct from the adjustable joint,” as recited by claim 1. Schumacher relates to a method and apparatus for mandibular osteosynthesis. For example, Figure 1 of

Schumacher, which is reproduced here to facilitate review, illustrates an embodiment of an osteosynthesis device 10 attached to a human mandible 12.



Device 10 includes an elongated plate 14 and a reinforcement member 64 connected to plate 14 via fasteners. Figure 9 of Schumacher, which is reproduced here to facilitate review, illustrates an alternative structure for plate 14. The structure includes links 90 and 92 that can be connected via cooperating ends 94, 96 using a fastener placed into bone and through aligned apertures 100 of the cooperating ends. The cooperating ends have serrations 98 that surround each aperture 100 and provide discrete angular positioning of the links relative to one another.

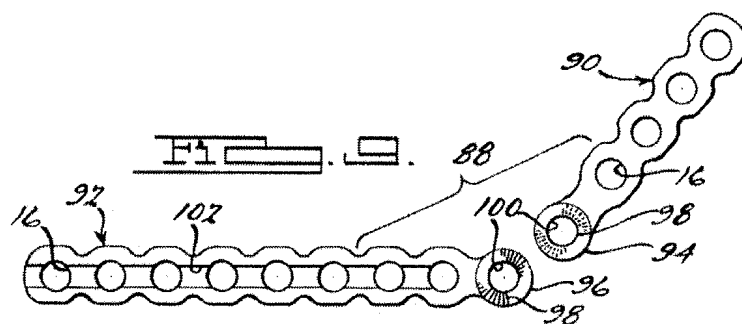
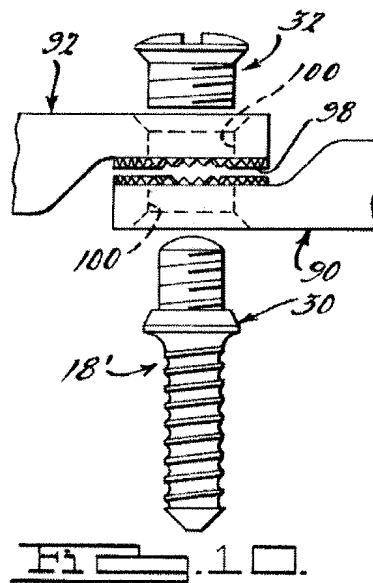


Figure 10 of Schumacher, which is reproduced here to facilitate review, illustrates an exploded side view of links 90 and 92 in an aligned configuration and in the presence

of fastener 18' (composed of parts 30 and 32) that connects the links. Significantly, serrations 98 form an integral part of the interface between the links by providing engagement of the links with one another at the interface. Specifically, the serrations are turned toward one another, for mechanical engagement, to the inside of the connected links. Thus, the serrations would not even be visible from above or below the links, and they would only incidentally be visible from the side (to the extent that they could be seen at all from the side when the links are positioned on bone). Accordingly, serrations 98 are not reference marks at all and particularly not "reference marks that are distinct from the adjustable joint," as recited by claim 1.



In summary, neither cited reference teaches or suggests every element of independent claim 1. Claim 1 thus should be allowed. In addition, claims 21–23, which depend from claim 1, also should be allowed for at least the same reasons as claim 1.

B. Claims 2–11

Independent claim 2, as amended, reads as follows:

2. (Currently Amended) A bone plate for bone fixation, comprising:

first and second plate members each having an outer face and structured to be attached to at least one bone such that the plate members are disposed under skin and such that the outer face opposes the at least one bone, the first and second plate members being connected by a joint so that a relative disposition of the first and second plate members is adjustable; and

a plurality of reference marks disposed on the outer face of at least one of the first and second plate members and configured to visibly indicate the relative disposition when the outer face is viewed.

Claim 2 is patentable over Jonsson and Schumacher because neither reference teaches or suggests every element of amended claim 2. Jonsson does not teach or suggest first and second plate members “structured to be attached to at least one bone such that the plate members are disposed under skin,” as described above in relation to claim 1. Schumacher does not teach or suggest “a plurality of reference marks disposed on the outer face of at least one of the first and second plate members and configured to visibly indicate the relative disposition when the outer face is viewed.” Instead, Schumacher discloses serrations 98 that are visible from the side with links 90, 92 in a connected configuration, but are not visible when viewing the outer faces of the links in the connected configuration (see reproduced Figure 10 above). Claim 2 thus is not anticipated by the cited references and should be allowed. In addition, claims 3–11, which depend from claim 2, also should be allowed for at least the same reasons as claim 2.

C. Claims 14–20 and 24

Independent claim 14, as amended, reads as follows:

14. (Currently Amended) A method of bone fixation, comprising:
securing plate members of a bone plate to a radius bone such that the bone plate is disposed under skin; and

adjusting a relative disposition of the plate members by relative movement of the plate members and observation of reference marks, the reference marks being disposed on at least one of the plate members and being configured to indicate a plurality of predefined adjustments.

Claim 14 is patentable over Jonsson and Schumacher because neither reference teaches or suggests every element of amended claim 14. Jonsson does not teach or suggest securing “such that the bone plate is disposed under skin,” as described above in relation to claim 1. Schumacher, in turn, does not teach or suggest “securing plate members of a bone plate to a radius bone.” Instead, Schumacher relates to mandibular osteosynthesis. Claim 14 thus is not anticipated by the cited references and should be allowed. In addition, claims 15–20 and 24, which depend from claim 14, also should be allowed for at least the same reasons as claim 14.

D. Claim 25

New independent claim 25 reads as follows:

25. (New) A bone plate for bone fixation, comprising:
first and second plate members structured to be attached to at least one bone and disposed under skin, the plate members being connected by a joint that permits relative pivotal movement of the plate members about a pivot axis such that a relative angular disposition of the first and second plate members is adjustable; and
a plurality of reference marks disposed on at least one of the plate members and configured to indicate the relative angular disposition visibly when the bone plate is viewed along the pivot axis.

Claim 25 is patentable over Jonsson and Schumacher because neither reference teaches or suggests every element of new claim 25. Jonsson does not teach or suggest first and second plate members structured to be “disposed under skin,” as described above in relation to claim 1. Schumacher, in turn, does not teach or suggest reference

marks and particularly not reference marks that "indicate the relative angular disposition visibly when the bone plate is viewed along the pivot axis." Serrations 98 are not reference marks and are not visible along the pivot axis of links 90, 92 when the links are connected (see reproduced Figures 9 and 10 above in relation to claim 1). New claim 25 thus is not anticipated by the cited references and should be allowed.

VII. Conclusion

Applicant believes that every issue raised by the Examiner has been addressed and that each of the pending claims is patentable over the cited references. Accordingly, applicant respectfully requests that the Examiner issue a Notice of Allowance covering all of the pending claims. If the Examiner has any questions, or if a telephone interview would in any way advance prosecution of the application, please contact the undersigned attorney of record, or his associate Stan Hollenberg (Reg. No. 47,658), both at 503-224-6655.

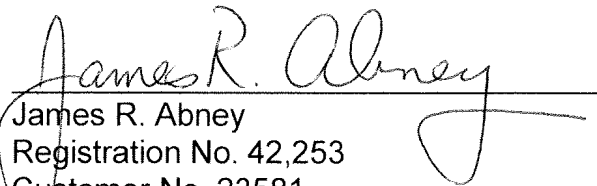
Respectfully submitted,

KOLISCH HARTWELL, P.C.

CERTIFICATE OF E-FILING

I hereby certify that this correspondence is being submitted to the U.S. Patent and Trademark Office using the United States Patent and Trademark EFS-Web on February 20, 2007.


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